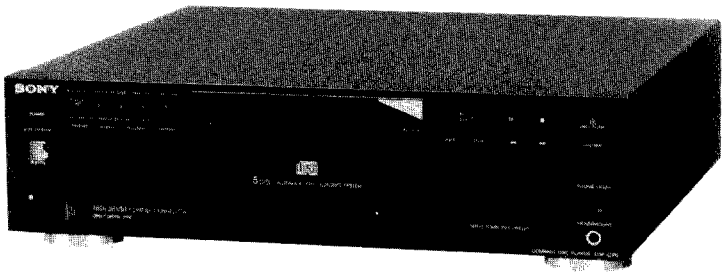
CDP-C211/C215/C315

SERVICE MANUAL



US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
CDP-C315
US Model
Canadian Model
CDP-C215
US Model
CDP-C211

Model Name Using Similar Mechanism	CDP-C312M
CD Mechanism Type	CDM16E2-5BD3
Optical Pick-Up Block Type	BU-5BD3

SPECIFICATIONS

System — Compact disc digital audio system
Laser — Semiconductor laser (λ=780 nm)
Emission duration: continuous
Laser output — Max. 44.6 μW*
* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response — 2 Hz — 20 kHz (±0.5 dB)
Signal to noise ratio — More than 100 dB
Dynamic range — More than 98 dB
Harmonic distortion — Less than 0.005% (1 kHz)
Channel separation — More than 100 dB (1 kHz)
Wow and flutter — Below measurable limit
Outputs — LINE OUT (phono jacks)
Output level 2 V (at 50 kilohms)
Load impedance over 10 kilohms
PHONES (stereo phone jack) (CDP-C315/C215 only)
Output level 0 — 10 mW (variable) (at 32 ohms)

General
Power requirements — Model for USA and Canada
120 V AC, 60Hz
Model for Australia (CDP-C315 only)
240 V AC, 50/60 Hz
Power consumption — 12 W
Dimensions — CDP-C315/C215/C211
Approx. 430 × 125 × 385 mm (w/h/d) (17 × 5 × 15¼ inches) including projecting parts and controls
Weight — CDP-C315/C215/C211
Approx. 6 kg (13 lbs 4 oz), net

Remote commander RM-D315
Remote control system — Infrared control
Power requirements — 3 V DC with two batteries size AA (IEC designation R6)

Supplied accessories
Audio signal connecting cord (phono plug × 2 ↔ phono plug × 2) (1)
Remote commander (1) (CDP-C315 only)
R6 (size AA) batteries (2) (CDP-C315 only)
Operating Manual (1)

Design and specifications subject to change without notice.

MICROFILM

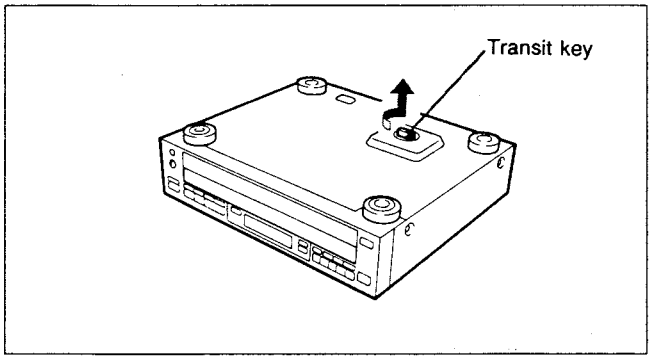
COMPACT DISK PLAYER

SONY®

Note on the Transit Key

The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.



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SAFETY-RELATED COMPONENT WARNING!!

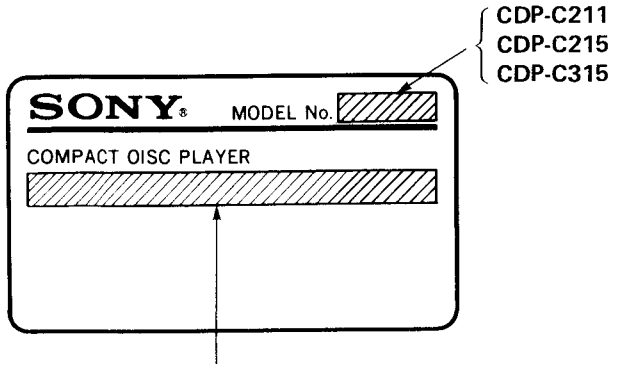
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

—Model Number Label—



US, Canadian model : AC : 120V 60Hz 11W
AEP model : AC : 220–230V~50/60Hz
UK, Australian model : AC : 240V~50/60Hz
E model : AC : 110–120V, 220–240V~50/60Hz

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

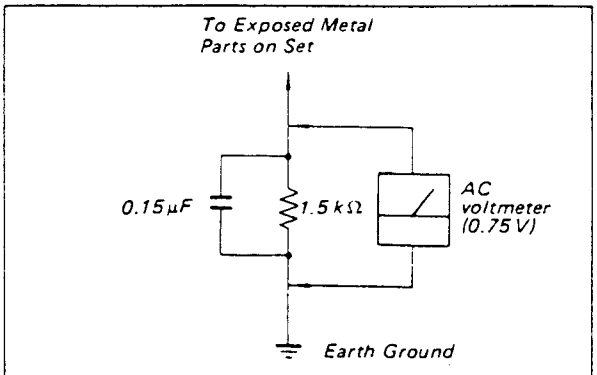


Fig. A. Using an AC voltmeter to check AC leakage.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 mm
   - Emission Duration: continuous
   - Laser Output Power: less than 44.6 μW*
     * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

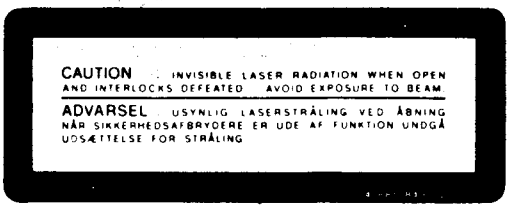
1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*
     * Målt i 1,6 mm afstand fra overfladen af objektiv-linsen pa den optiske pick-up enhed.
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning


CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED AVOID EXPOSURE TO BEAM
ADVARSEL USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING

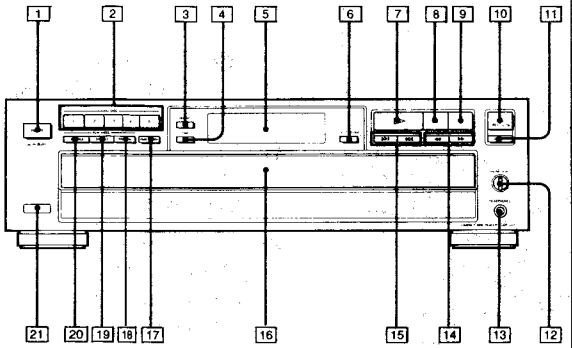
VAROITUS: Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

SECTION 1
GENERAL

1-1. LOCATION OF CONTROLS

Front Panel

CDP-C315/C215/C211

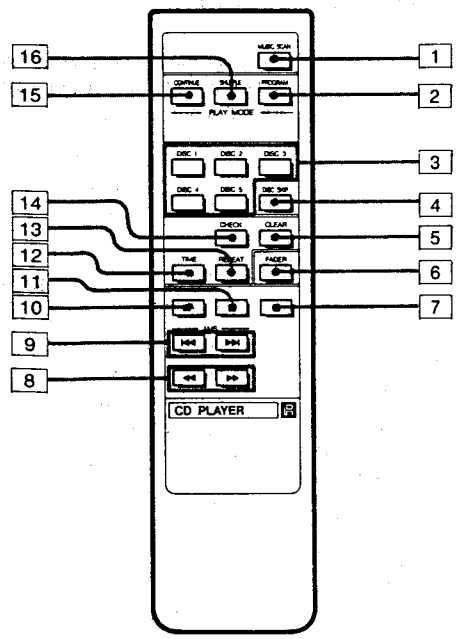


1 POWER switch
2 Disc 1-5 buttons
3 REPEAT button
4 TIME button
5 Display window
6 EDIT/TIME FADE button
7 ▶ (play) button
8 ❚❚ (pause) button
9 ■ (stop) button
10 ⏏ OPEN/CLOSE button
11 DISC SKIP button
12 (Headphones) PHONE LEVEL control (CDP-C211 is not provided.)
13 HEADPHONES jack (CDP-C211 is not provided.)
14 ◀◀/▶▶ (manual search) buttons
15 ⏮/⏭ (AMS*) buttons
16 Disc tray
17 PEAK SEARCH button
18 PROGRAM button
19 SHUFFLE button
20 CONTINUE button
21 Remote sensor

* AMS is the abbreviation of Automatic Music Sensor.

Remote Commander

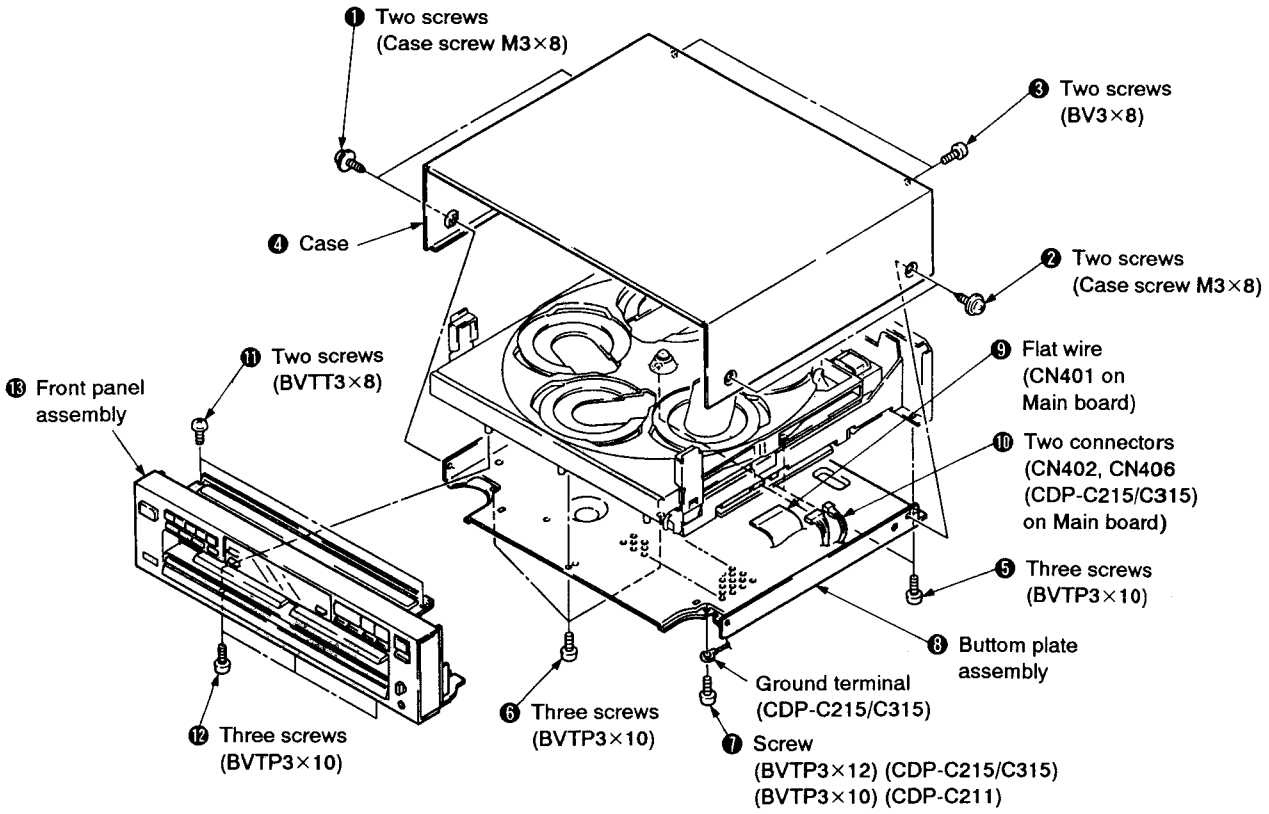
(CDP-C315 only)



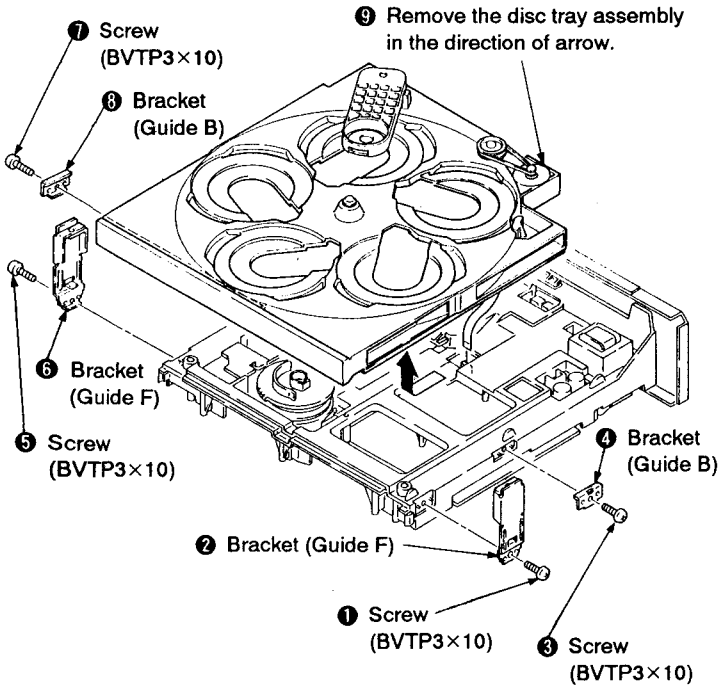
1 MUSIC SCAN button
2 PROGRAM button
3 DISC 1-5 buttons
4 DISC SKIP button
5 CLEAR (program clear) button
6 FADER button
7 ■ (stop) button
8 ◀◀/▶▶ (manual search) buttons
9 ⏮ ⏭ (AMS) buttons
10 ▶ (play) button
11 ❚❚ (pause) button
12 TIME button
13 REPEAT button
14 CHECK (program check) button
15 CONTINUE button
16 SHUFFLE button

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF FRONT PANEL AND CASE ASSEMBLIES

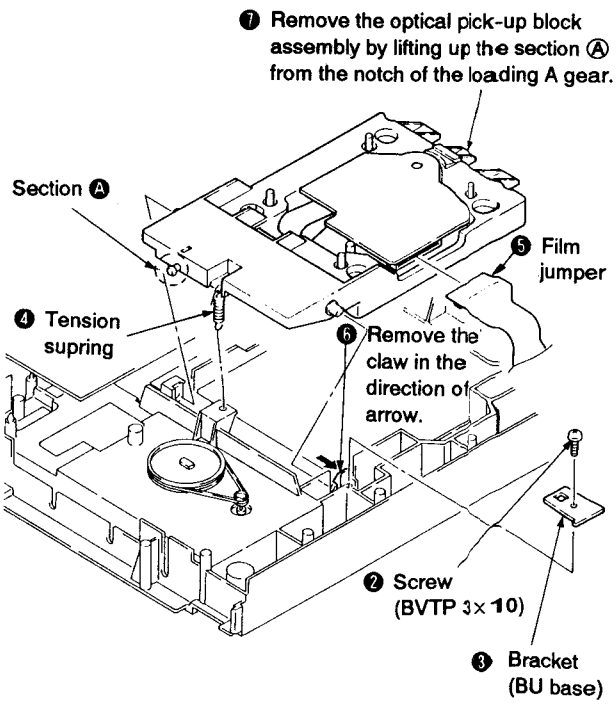


2-2. REMOVAL OF DISC TRAY ASSEMBLY



2-3. REMOVAL OF OPTICAL PICK-UP BLOCK ASSEMBLY

1) Replace the set up side down.

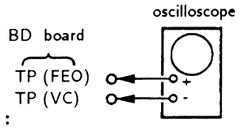


SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

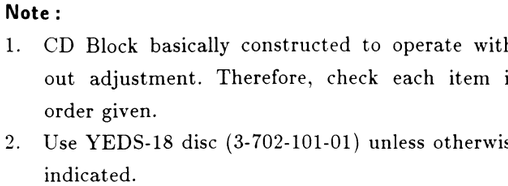
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

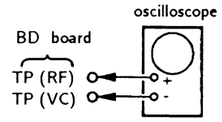
1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.



5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

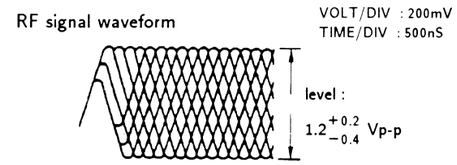


Procedure :

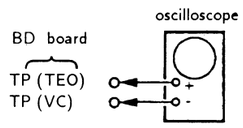
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

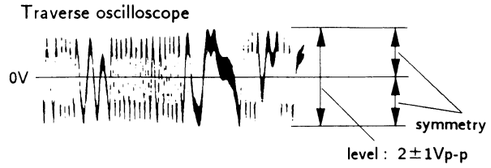


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

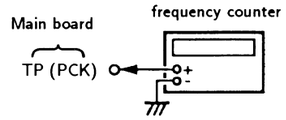


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.

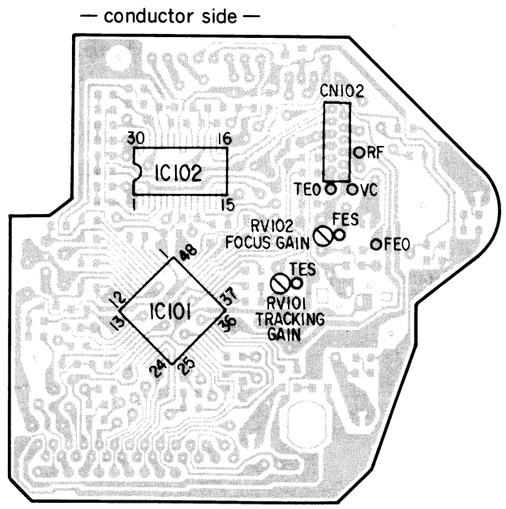


2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

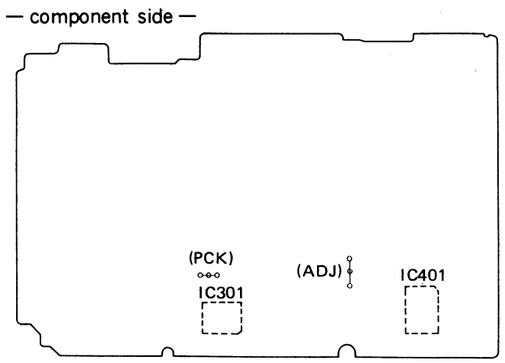
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

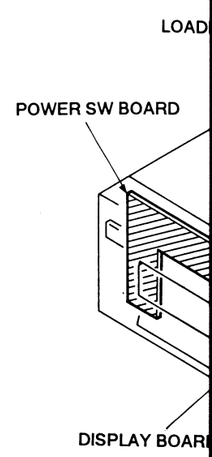
Adjustment Locations :
[BD board]



[Main board]

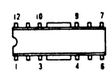


4-1. CIRCUIT BOARDS L

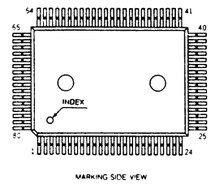


4-2. SEMICONDUCTOR

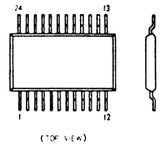
CXA1291P



CXD2500AQ
CXP50116-213Q

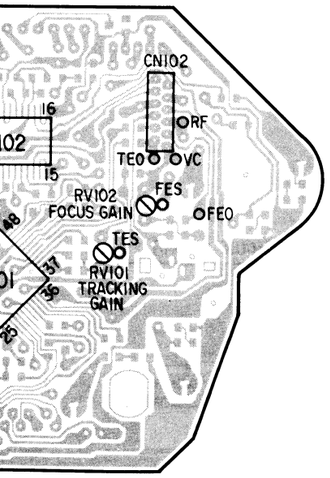


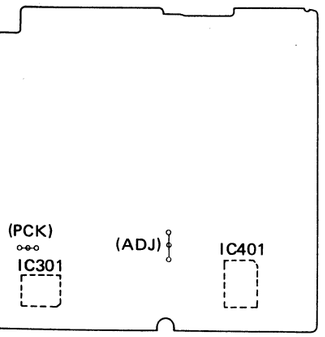
CXD2560M



ons :

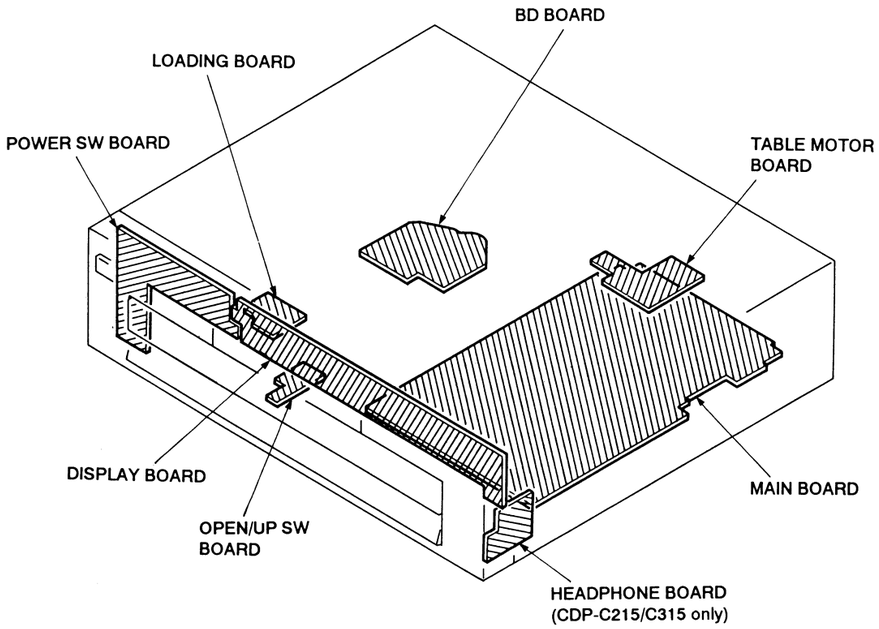
or side —





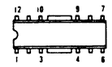
SECTION 4
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION

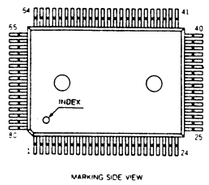


4-2. SEMICONDUCTOR LEAD LAYOUTS

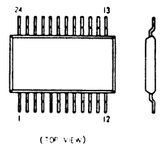
CXA1291P



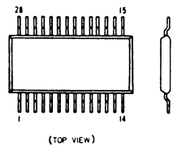
CXD2500AQ
CXP50116-213Q



CXD2560M

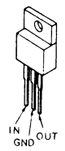


CXD2561M

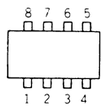


M5293L

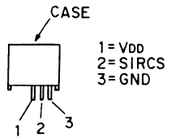
M5F7807L



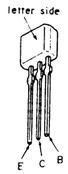
RC4556D
RC5532DD



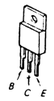
SBX1610-59



2SA1175-HFE



2SB1094-L

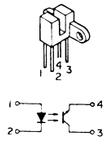


2SC1815-Y
2SC2878-AB

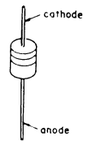
2SC3623-LK
DTA144ES
DTC144ES

2SD774-34

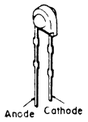
GP-1A521



11EQS04
11ES2
1SS120
RD5.6ES-B2
RD6.8ES-B2

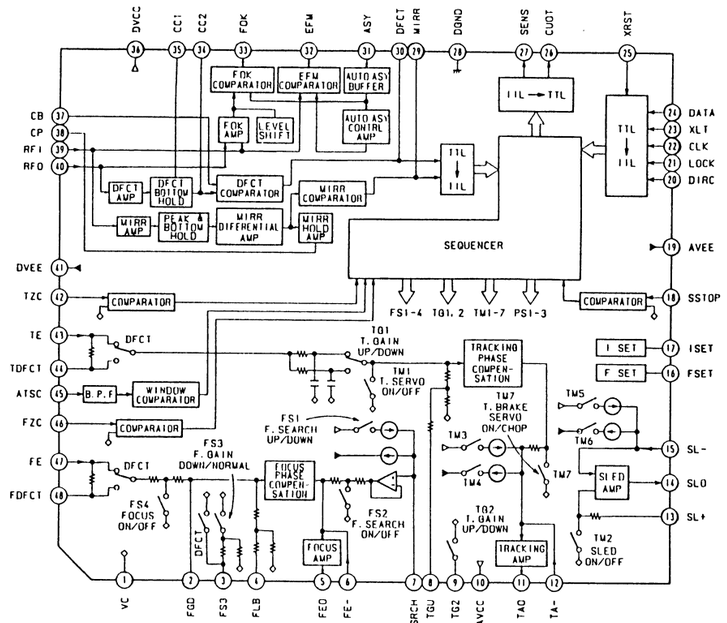


BR4361F

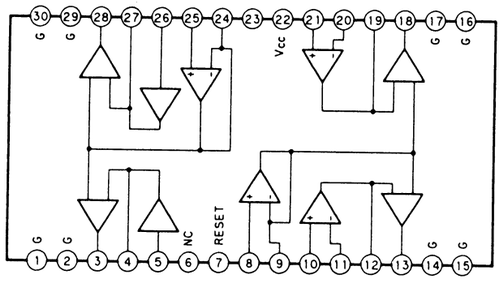


4-3. IC BLOCK DIAGRAMS

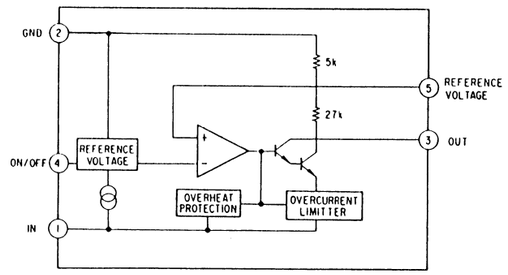
IC101 CXA1372Q

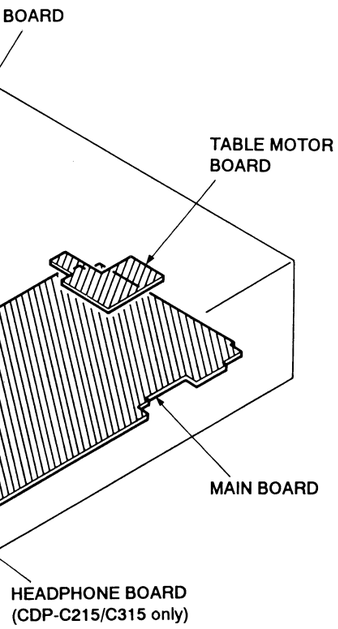


IC102 LA6532M



IC201 M5293L

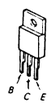




= VDD
= SIRCS
= GND

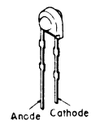
E

2SB1094-L



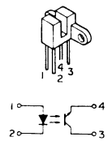
2SD774-34

BR4361F



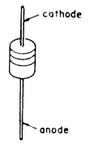
2SC1815-Y
2SC2878-AB

GP-1A521



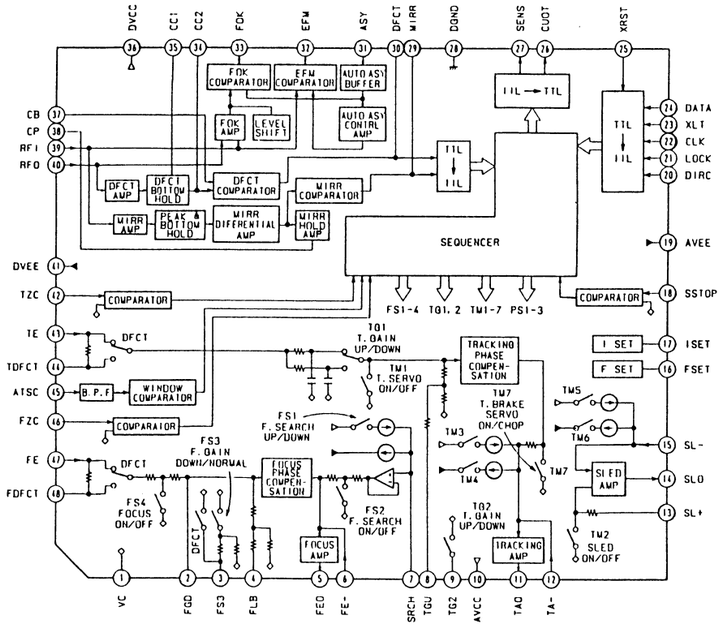
2SC3623-LK
DTA144ES
DTC144ES

11EQS04
11ES2
1SS120
RD5.6ES-B2
RD6.8ES-B2

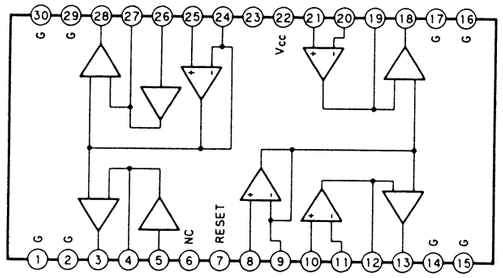


4-3. IC BLOCK DIAGRAMS

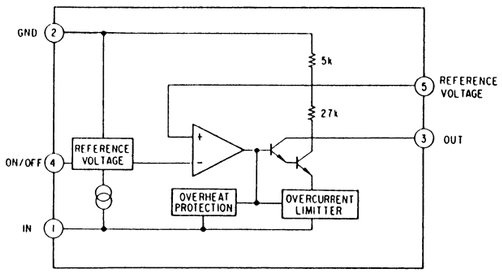
IC101 CXA1372Q



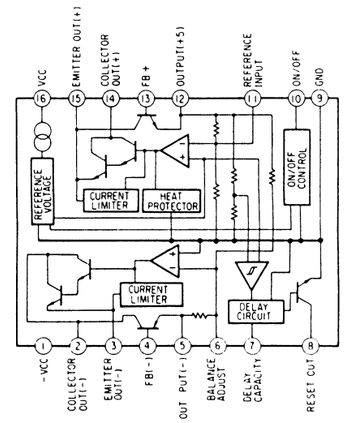
IC102 LA6532M



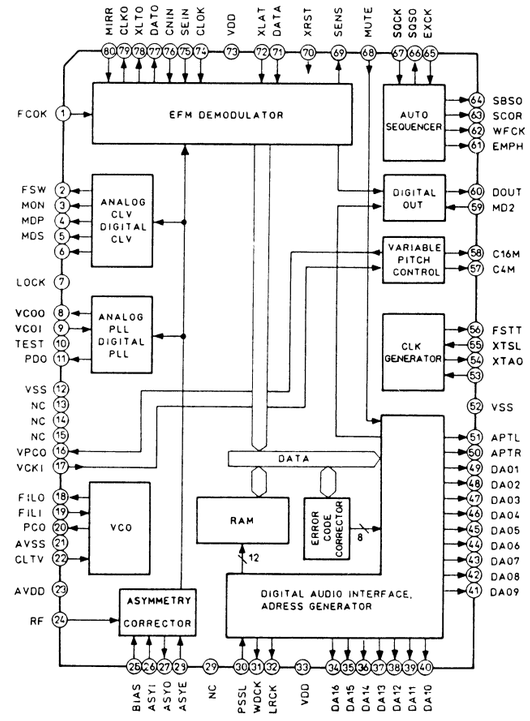
IC201 M5293L



IC202 M5290P-16



IC301 CXD2500Q



4-4. PRINTED WIRING BOARDS

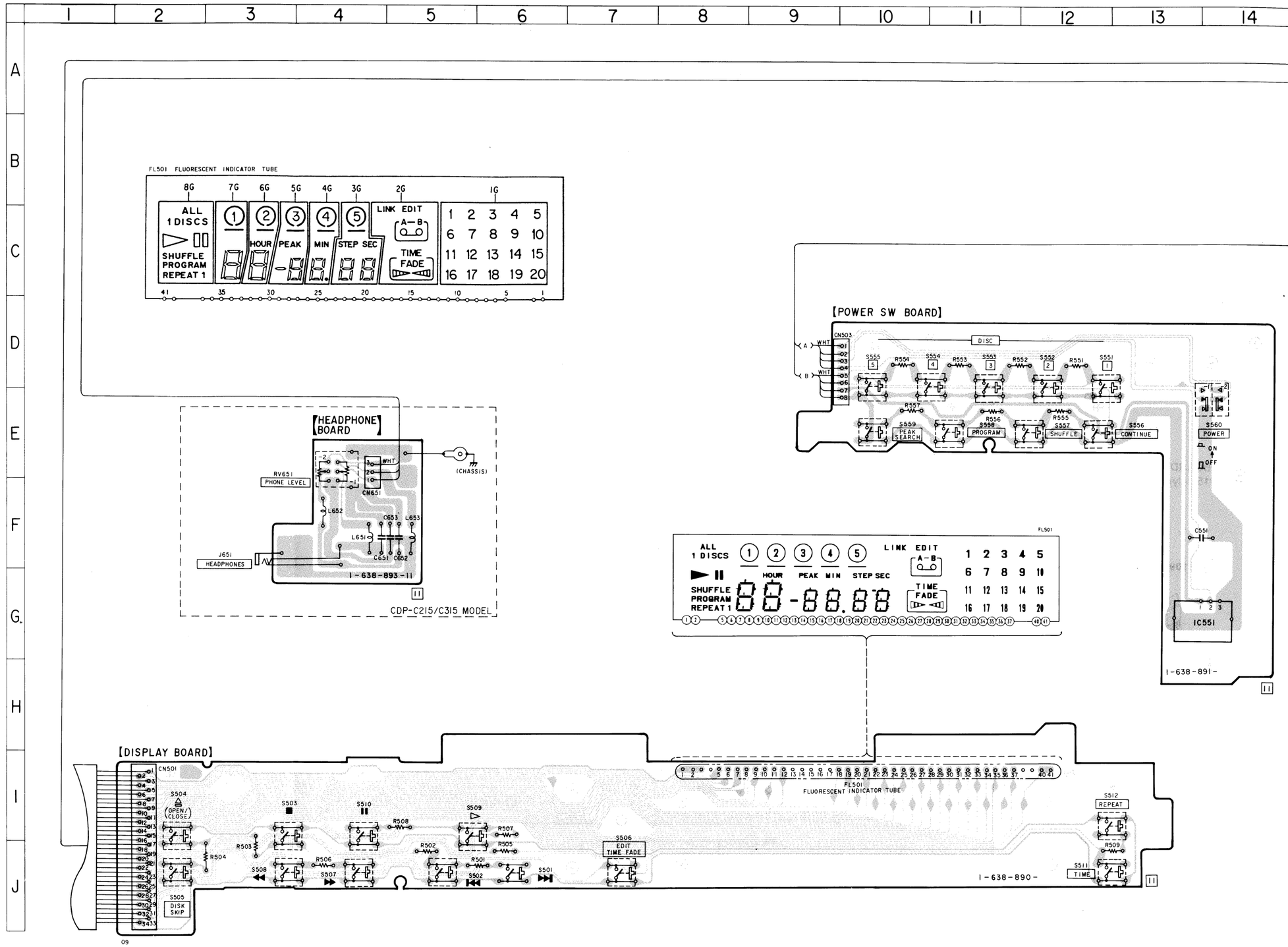
- **Refer to page 9 for Semiconductor Lead Layouts.**

- **Semiconductor Location**

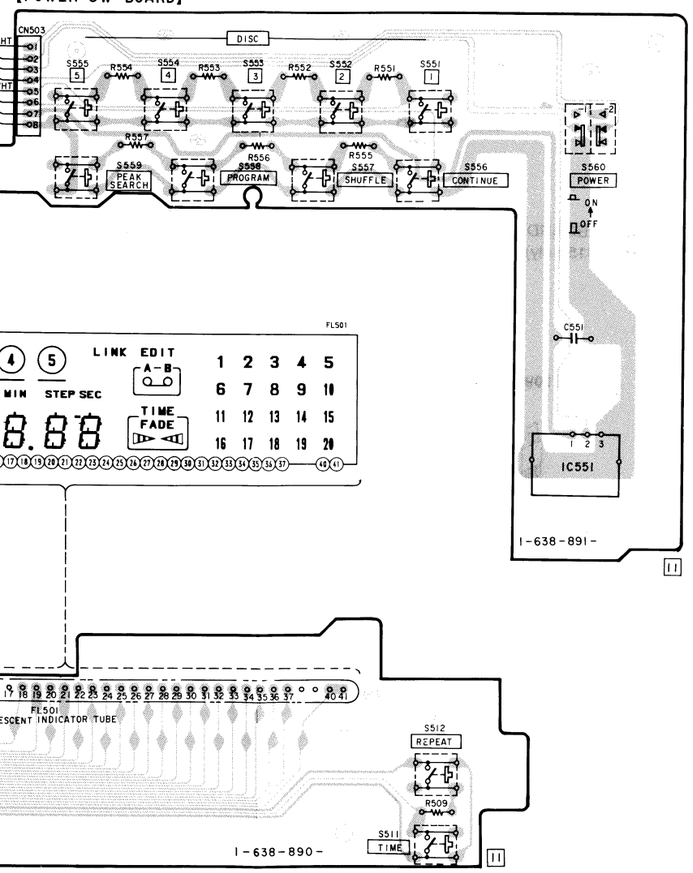
Ref. No.	Location
D201	I-25
D202	I-25
D203	E-24
D204	E-24
D205	E-24
D206	E-24
D208	E-19
D209	E-19
D341	H-21
D351	H-21
D701	H-30
IC101	D-29
IC102	C-29
IC201	I-24
IC202	F-23
IC203	F-20
IC204	G-24
IC301	J-21
IC302	I-23
IC303	G-21
IC306	F-18
IC307	F-18
IC309	E-17
IC401	I-17
IC402	G-16
IC551	G-14
Q101	E-29
Q201	J-25
Q202	F-23
Q203	E-23
Q204	G-23
Q205	F-23
Q206	F-23
Q209	F-21
Q341	F-16
Q342	F-16
Q343	F-16
Q344	H-21
Q371	G-17
Q372	E-17
Q373	F-17
Q374	F-17
Q375	F-17
Q376	F-17
Q401	I-16

Note:

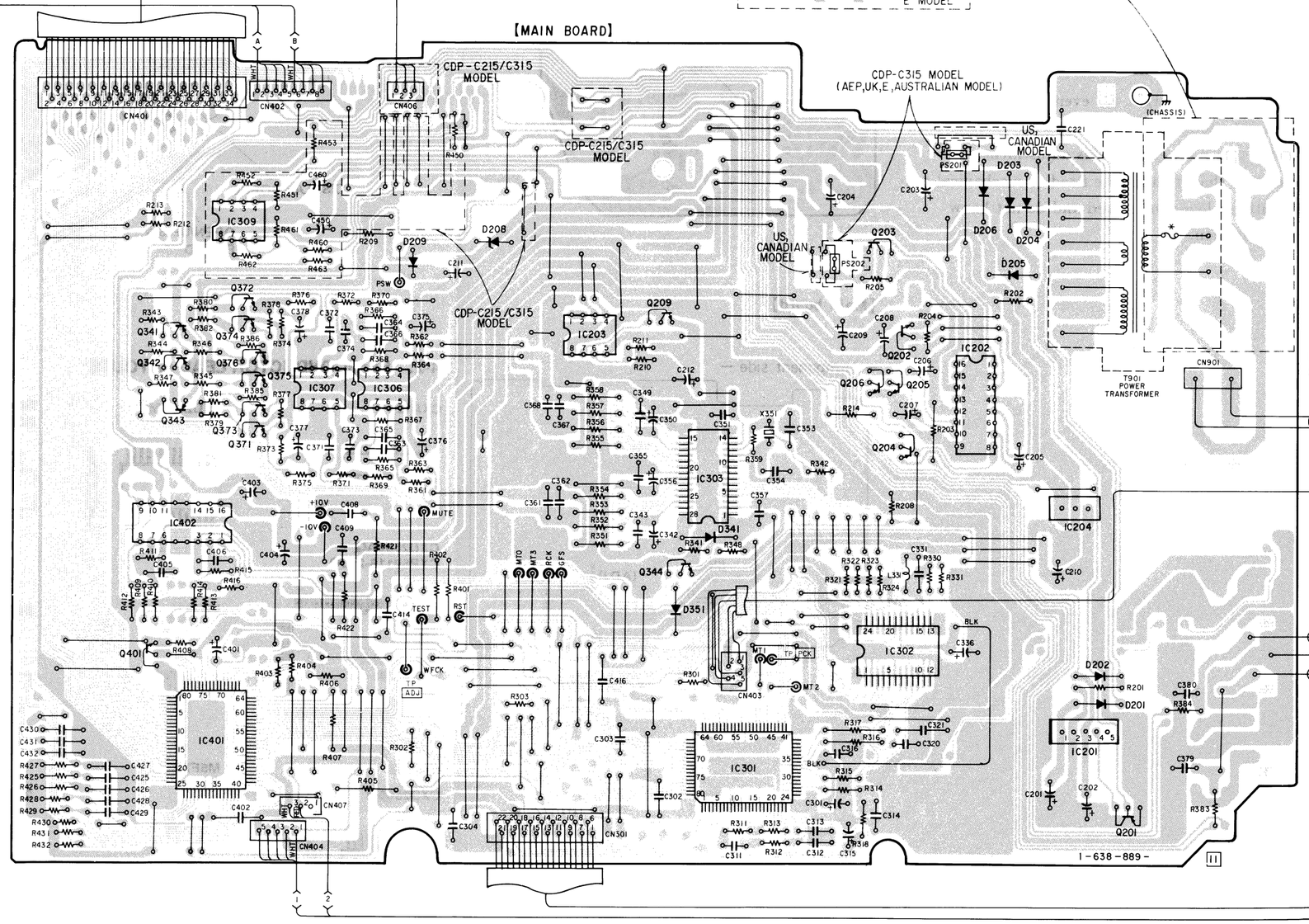
- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.



【POWER SW BOARD】



【MAIN BOARD】



【BD

US.CANDIAN, AEP,UK,AUSTRALIAN MODEL

17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30

S201
VOLTAGE SELECTOR
110/120V
220/240V
E MODEL

【MAIN BOARD】

CDP-C215/C315 MODEL
CDP-C315 MODEL (AEP,UK,E,AUSTRALIAN MODEL)
US, CANADIAN MODEL
(CHASSIS)
T901 POWER TRANSFORMER
CN901
US,CANDIAN, AEP,UK ,AUSTRALIAN MODEL
AC IN
J381 LINE OUT
-1 -L-
-2 -R-
I-638-889-

【BD BOARD】

OPTICAL PICK-UP BLOCK KSS-240A
M102 SLIDE
M101 SLED
S101 (LIMIT)
RV102 FES
RV101 TES
IC101
IC102
CN103
CN101

【TABLE MOTOR BOARD】

M701 (TABLE)
S701 (DOWN)
RED
CN707
I-638-729-

【LOADING MOTOR BOARD】

M702 (LOADING)
I-638-730-

【OPEN/UP SW BOARD】

S702 (OPEN/UP)
UP → OPEN
CN705
CN706
I-638-731-

4-5. SCHEMATIC DIAGRAM

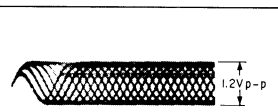
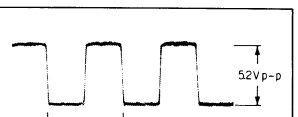
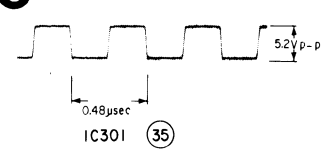
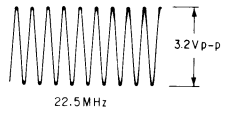
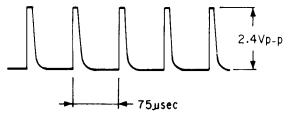
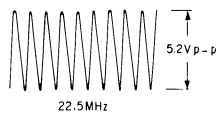
- **Refer to page 10 for IC BLOCK Diagrams.**

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬▬ : B+ Line
- ▬ ▬ ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

❶  IC101 (40) PLAY (RF)	❺  IC301 (32)
❷ IC101 (43) PLAY (TES)	❻  IC301 (35)
❸ IC101 (47) PLAY (FES)	❼  IC303 (11)
❹  IC301 (4) PLAY (MDP)	❽  IC303 (12)

IC102
LA6532M-TI
FOCUS, TRACKING
COIL DRIVE
SLED, SPINDLE
MOTOR DRIVE

OPTICAL PICK-UP BLOCK
(KSS-240A)

【POWER SW BOARD】

IC551
SBX1610-59
REMOCON
DETECTOR

【DISPLAY BOARD】

FL501 FLUORESCENT INDICATOR TUBE

【OPEN/UP SW BOARD】

【LOADING MOTOR BOARD】

IC401
CXP50116-213Q
FL DRIVE/SYSTEM CONTROL

IC402
TABLE LOADING,
VOL MOTOR DRIVE

IC303
CXD2561M
D/A CONVERTER

IC302
CXD2560M
DIGITAL FILTER

IC202 M5290P-16

IC203
REF
VOLTAGE

IC204
M5F7807L
+7V REG

IC201
M5293L
-32V REG

Q204,205
POWER ON/OFF
CONTROL

Q206
RESET

Q344
INVERTER

C301
XD2500AQ
SIGNAL PROCESSOR
CLV SERVO

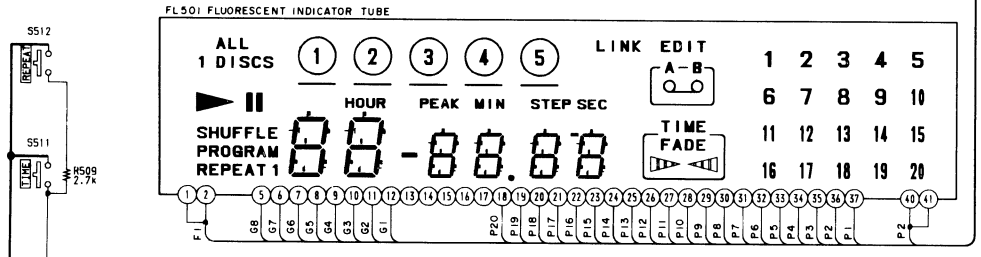
AEP,UK,E
AUSTRALIAN
MODEL

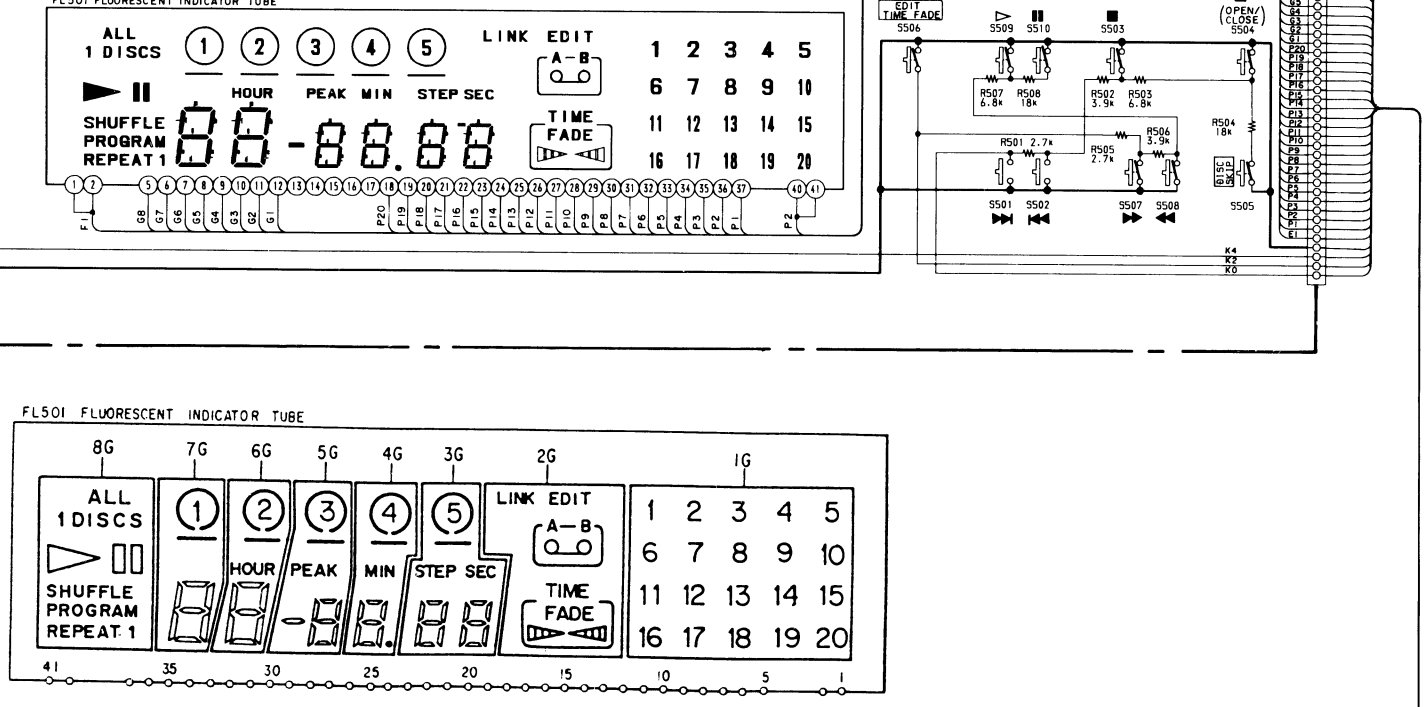
US,CANADIAN MODEL

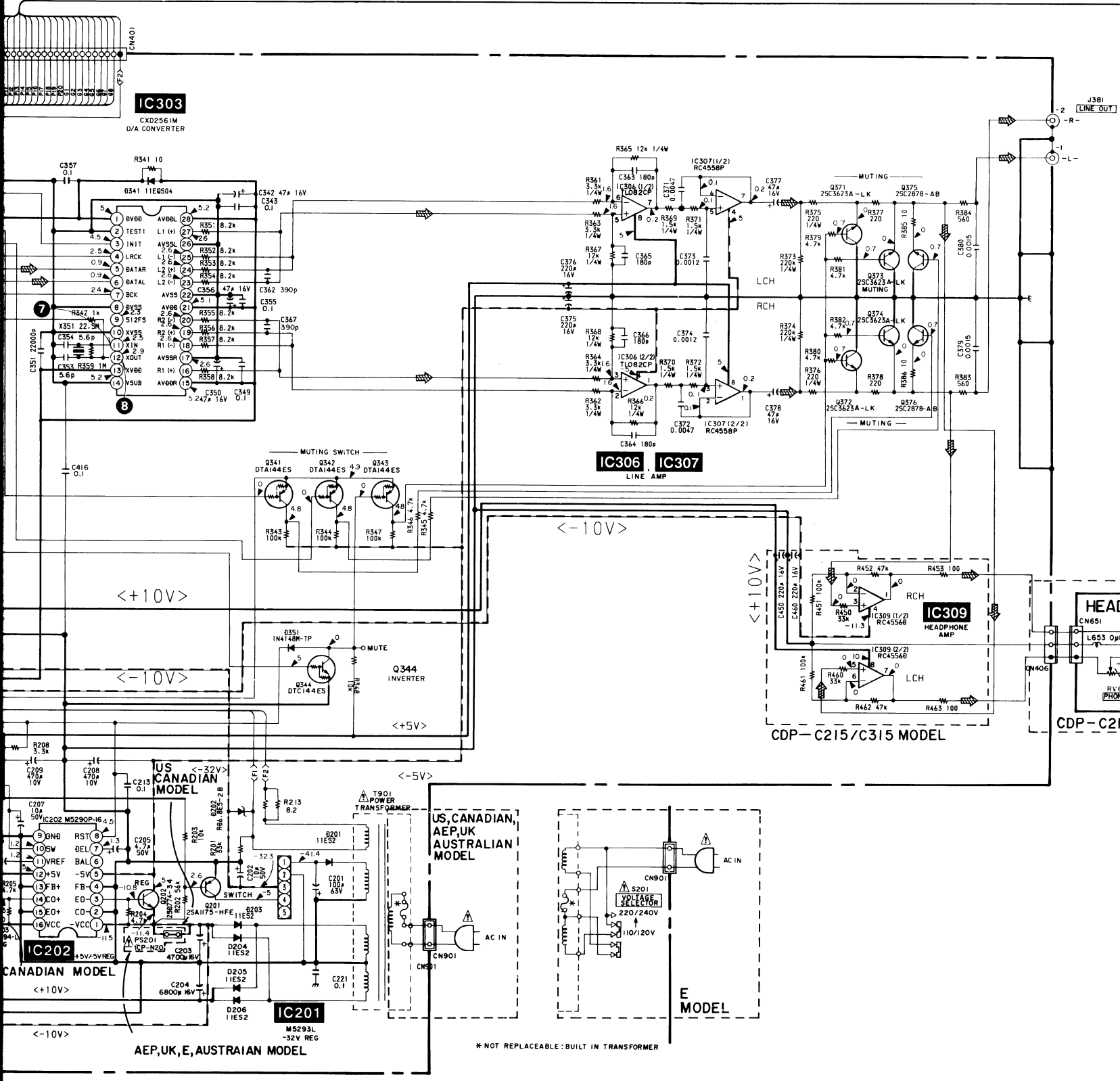
AEP,UK,E,AUSTRAIAN MODEL

【DISPLAY BOARD】

FL501 FLUORESCENT INDICATOR TUBE







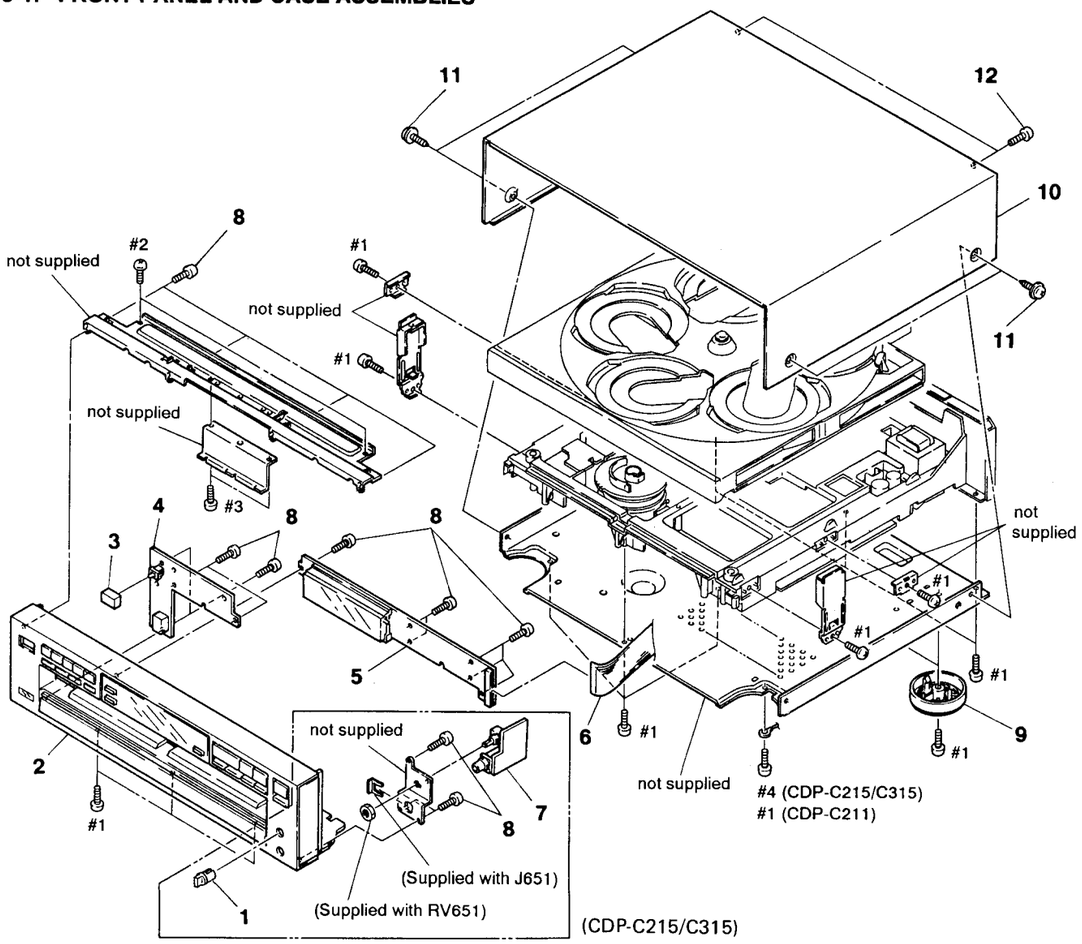
SECTION 5
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

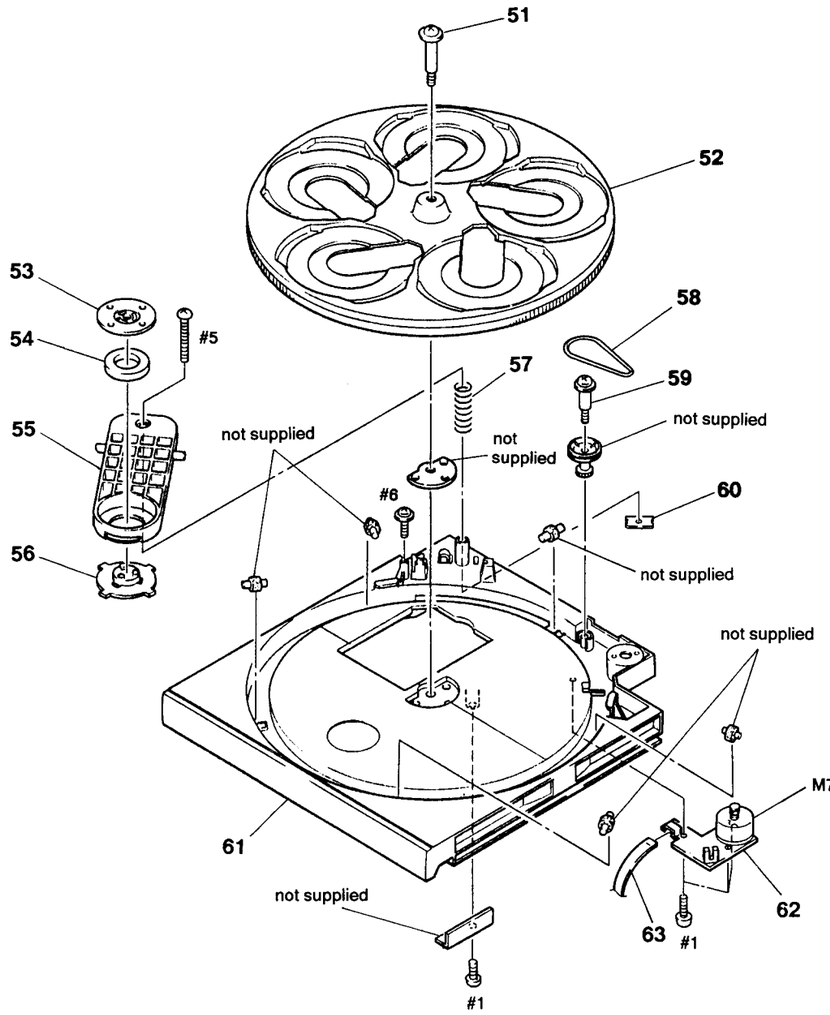
5-1. FRONT PANEL AND CASE ASSEMBLIES



(CDP-C215/C315)

Ref. No.	Part No.	Description	Remark
1	4-922-531-11	KNOB (A TYPE), VOL (C215/C315)	
2	X-4941-479-1	PANEL ASSY, FRONT (C315:US, Canadian)	
2	X-4941-480-1	PANEL ASSY, FRONT (AEP, UK, E, Australian)	
2	X-4941-481-1	PANEL ASSY, FRONT (C215)	
2	X-4941-482-1	PANEL ASSY, FRONT (C211)	
3	4-922-921-01	BUTTON (POWER)	
4	* 1-638-891-11	POWER SW BOARD	
5	* 1-638-890-11	DISPLAY BOARD	
6	1-590-835-11	WIRE, FLAT TYPE (34 CORE)	
7	* 1-638-893-11	HEADPHONE BOARD (C215/C315)	
8	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
9	X-4924-463-1	FOOT ASSY (AEP, UK, E, Australian)	
9	X-4924-464-1	FOOT ASSY (US, Canadian)	
10	* 4-944-153-01	CASE	
11	3-704-366-01	SCREW (CASE) (M3X8)	
12	3-703-685-21	SCREW (+BV 3X8)	

5-2. DISC TRAY ASSEMBLY

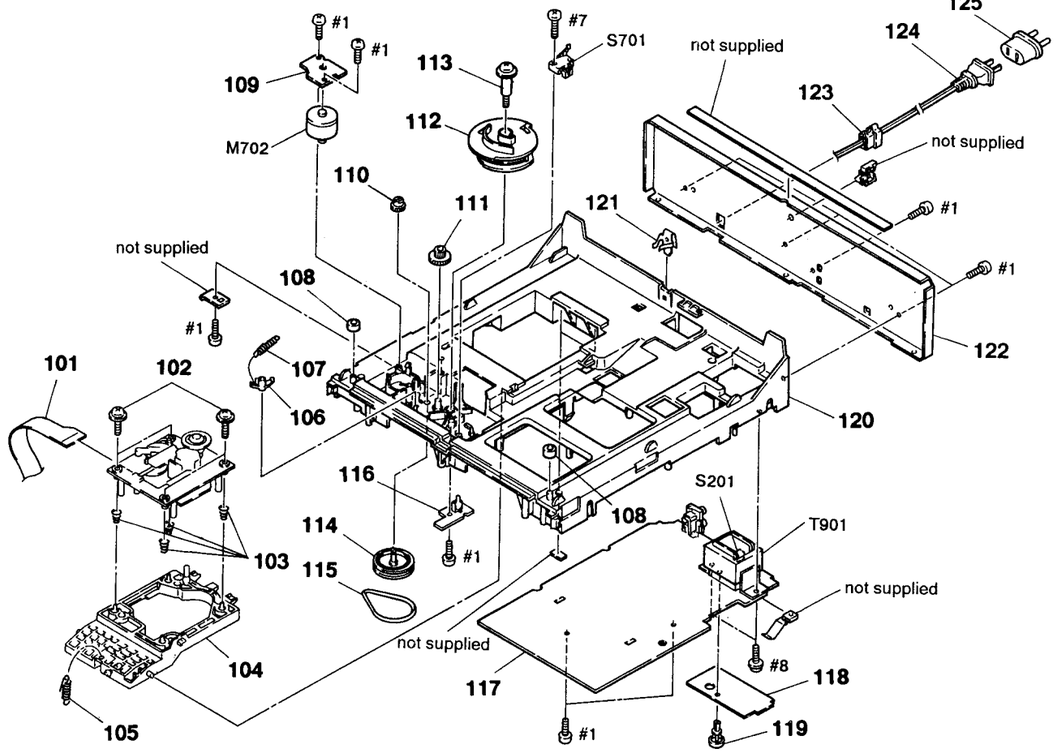


Ref. No.	Part No.	Description	Remark
51	4-926-384-01	SCREW, STEP	
52	* 4-926-383-01	TABLE (B), DISK	
53	4-921-029-01	YOKE, CHUCKING	
54	1-452-340-21	MAGNET	
55	* 4-930-506-02	BRACKET (PRESS PULLEY)	
56	4-921-022-01	PULLEY, CHUCKING	
57	4-926-395-01	SPRING, COMPRESSION	
58	4-926-399-01	BELT	
59	4-923-597-01	SCREW, STEP	
60	* 4-926-388-01	BRACKET (ADJUSTMENT)	
61	4-944-160-11	TABLE (A), DISC (C215)	
61	4-944-160-01	TABLE (A), DISC (C211/C315)	
62	* 1-638-729-11	TABLE MOTOR BOARD	
63	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)	

5-3. CHA

Ref. No.	P
101	1
102	4
103	4
104	* 4
105	4
106	4
107	4
108	* 4
109	* 1
110	4
111	4
112	4
113	4
114	X
115	4
116	* 1
117	* A
117	* A
117	* A
118	* 4
119	3
120	* 4
121	* 4

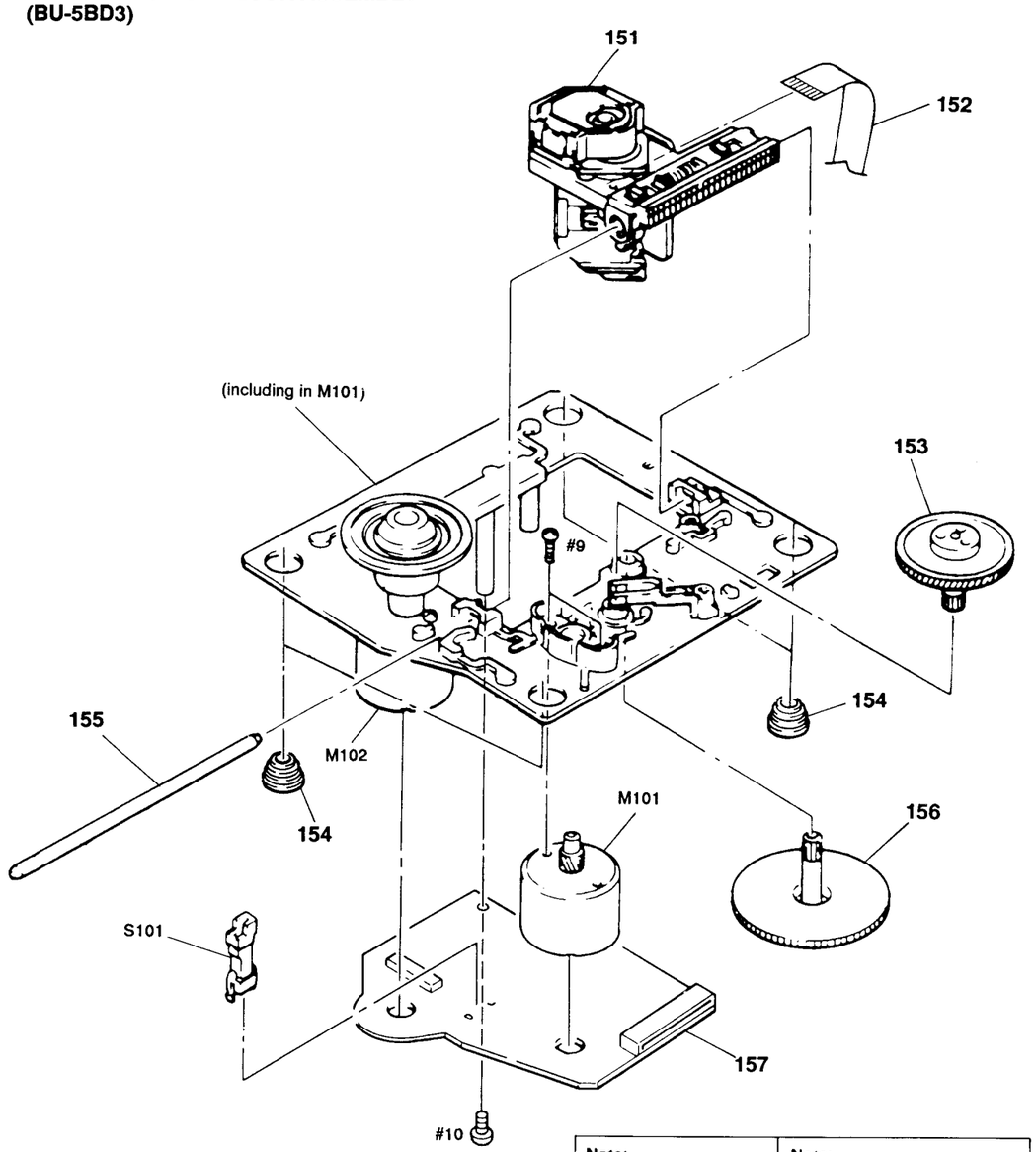
5-3. CHASSIS ASSEMBLY



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
101	1-535-892-11	JUMPER, FILM (WITH TERMINAL)	
102	4-933-134-01	SCREW (+PTPWH M2.6X6)	
103	4-917-541-01	SPRING (B)	
104	✱ 4-934-373-01	BRACKET (BU)	
105	4-937-911-01	SPRING, TENSION	
106	4-917-519-01	LEVER, SET	
107	4-924-412-01	SPRING (B), TENSION	
108	✱ 4-934-382-01	CUSHION	
109	✱ 1-638-730-11	LOADING MOTOR BOARD	
110	4-934-375-01	GEAR (LOADING B)	
111	4-934-381-01	GEAR (LOADING C)	
112	4-934-391-01	GEAR (LOADING A)	
113	4-926-317-01	SCREW, STEP	
114	X-4941-529-1	PULLEY ASSY	
115	4-944-490-01	BELT (TIMING)	
116	✱ 1-638-731-11	OPEN/UP SW BOARD	
117	✱ A-4617-825-A	MAIN BOARD, COMPLETE (AEP, UK, Australian)	
117	✱ A-4617-826-A	MAIN BOARD, COMPLETE (E)	
117	✱ A-4617-820-A	MAIN BOARD, COMPLETE (US, Canadian)	
118	✱ 4-944-178-01	SHEET (INSULATING)	
119	3-531-576-11	RIVET	
120	✱ 4-943-997-01	CHASSIS	
121	✱ 4-943-996-01	SPRING, LEAF	
122	✱ 4-943-681-51	PANEL, BACK (C215:US)	
122	✱ 4-943-681-61	PANEL, BACK (C211)	
122	✱ 4-943-681-71	PANEL, BACK (C215:Canadian)	
122	✱ 4-943-681-41	PANEL, BACK (E)	
122	✱ 4-943-681-21	PANEL, BACK (AEP)	
122	✱ 4-943-681-31	PANEL, BACK (UK, Australian)	
122	✱ 4-943-681-11	PANEL, BACK (C315:Canadian)	
122	✱ 4-943-681-01	PANEL, BACK (C315:US)	
123	✱ 3-703-571-12	BUSHING (S) (4516), CORD (E)	
123	✱ 3-703-244-00	BUSHING (2104), CORD (US, Canadian, AEP, UK, Australian)	
124	⚠ 1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
124	⚠ 1-575-653-21	CORD, POWER (E)	
124	⚠ 1-575-651-21	CORD, POWER (AEP)	
124	⚠ 1-558-946-21	CORD, POWER (UK)	
124	⚠ 1-590-836-11	CORD, POWER (US, Canadian)	
125	⚠ 1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
M702	A-4604-834-A	MOTOR ASSY, LOADING	
S201	⚠ 1-571-722-11	SWITCH, VOLTAGE SELECTION (E)	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)	
T901	⚠ 1-449-956-11	TRANSFORMER, POWER (E)	
T901	⚠ 1-449-955-11	TRANSFORMER, POWER (AEP, UK, Australian)	
T901	⚠ 1-449-954-11	TRANSFORMER, POWER (US, Canadian)	

5-4. OPTICAL PICK-UP BLOCK ASSEMBLY (BU-5BD3)



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
153	4-917-567-01	GEAR (M)	
154	4-933-126-01	INSULATOR (A)	
155	4-917-565-01	SHAFT, SLED	
156	4-917-564-01	GEAR (P), FLATNESS	
157	✱ A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

SECTION 6
ELECTRICAL PARTS LIST

BD

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref. No.	Part No.	Description			Remark
	* A-4617-371-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-050-82	IC CXA1372Q			
IC102	8-759-822-36	IC LA6532M			
		< JAMPER >			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W

BD MAIN DISPLAY POWER SW HEADPHONE

Ref. No.	Part No.	Description			Remark
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-238-016-11	RES, ADJ, CARBON 10K			
RV102	1-238-016-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
		**********			
		* A-4617-820-A MAIN BOARD, COMPLETE (C211)			
		* A-4617-820-A MAIN BOARD, COMPLETE (C215/C315: US, Canadian)			
		* A-4617-825-A MAIN BOARD, COMPLETE (C315: AEP, UK, Australian)			
		* A-4617-826-A MAIN BOARD, COMPLETE (C315:E)			
		**********			
		* 1-638-890-11 DISPLAY BOARD			
		**********			
		* 1-638-891-11 POWER SW BOARD			
		**********			
		* 1-638-893-11 HEADPHONE BOARD (C215/C315)			
		**********			
		* 4-875-327-01 HEAT SINK			
		7-682-547-04 SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C201	1-124-572-11	ELECT	100uF	20%	63V
C202	1-126-059-11	ELECT	10uF	20%	50V
C203	1-126-937-11	ELECT	4700uF	20%	16V
C204	1-126-017-11	ELECT	6800uF	20%	16V
C205	1-126-163-11	ELECT	4.7uF	20%	50V
C206	1-126-059-11	ELECT	10uF	20%	50V
C207	1-126-059-11	ELECT	10uF	20%	50V
C208	1-124-997-11	ELECT	470uF	20%	10V
C209	1-124-997-11	ELECT	470uF	20%	10V
C210	1-126-024-11	ELECT	220uF	20%	16V

Ref. No.	Part No.	Description			Remark
C211	1-124-893-11	ELECT	2200uF	20%	10V
C212	1-124-997-11	ELECT	470uF	20%	10V
C213	1-164-159-11	CERAMIC	0.1uF		50V
C221	1-164-159-11	CERAMIC	0.1uF		50V
C301	1-126-022-11	ELECT	47uF	20%	16V
C302	1-164-159-11	CERAMIC	0.1uF		50V
C303	1-164-159-11	CERAMIC	0.1uF		50V
C304	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-136-161-00	FILM	0.047uF	5%	50V
C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C313	1-161-494-00	CERAMIC	0.022uF		25V
C314	1-162-306-11	CERAMIC	0.01uF	20%	16V
C315	1-126-300-11	ELECT	0.47uF	20%	50V
C316	1-161-494-00	CERAMIC	0.022uF		25V
C320	1-164-159-11	CERAMIC	0.1uF		50V
C321	1-164-159-11	CERAMIC	0.1uF		50V
C331	1-162-208-31	CERAMIC	24PF	5%	50V
C336	1-126-022-11	ELECT	47uF	20%	16V
C342	1-126-022-11	ELECT	47uF	20%	16V
C343	1-164-159-11	CERAMIC	0.1uF		50V
C349	1-164-159-11	CERAMIC	0.1uF		50V
C350	1-126-022-11	ELECT	47uF	20%	16V
C351	1-161-494-00	CERAMIC	0.022uF		25V
C353	1-162-196-31	CERAMIC	5.6PF	10%	50V
C354	1-162-196-31	CERAMIC	5.6PF	10%	50V
C355	1-164-159-11	CERAMIC	0.1uF		50V
C356	1-126-022-11	ELECT	47uF	20%	16V
C357	1-161-772-11	CERAMIC	0.1uF	10%	25V
C362	1-162-289-31	CERAMIC	390PF	10%	50V
C363	1-162-285-31	CERAMIC	180PF	10%	50V
C364	1-162-285-31	CERAMIC	180PF	10%	50V
C365	1-162-285-31	CERAMIC	180PF	10%	50V
C366	1-162-285-31	CERAMIC	180PF	10%	50V
C367	1-162-289-31	CERAMIC	390PF	10%	50V
C371	1-130-479-00	MYLAR	0.0047uF	5%	50V
C372	1-130-479-00	MYLAR	0.0047uF	5%	50V
C373	1-130-472-00	MYLAR	0.0012uF	5%	50V
C374	1-130-472-00	MYLAR	0.0012uF	5%	50V
C375	1-126-024-11	ELECT	220uF	20%	16V
C376	1-126-024-11	ELECT	220uF	20%	16V
C377	1-126-022-11	ELECT	47uF	20%	16V
C378	1-126-022-11	ELECT	47uF	20%	16V
C379	1-130-473-00	MYLAR	0.0015uF	5%	50V
C380	1-130-473-00	MYLAR	0.0015uF	5%	50V
C401	1-126-022-11	ELECT	47uF	20%	16V
C402	1-164-159-11	CERAMIC	0.1uF		50V
C403	1-126-023-11	ELECT	100uF	20%	16V
C404	1-126-023-11	ELECT	100uF	20%	16V
C405	1-162-294-31	CERAMIC	0.001uF	10%	50V

MAIN DISPLAY POWER SW HEADPHONE

Ref. No.	Part No.	Description	Remark
C406	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C408	1-164-159-11	CERAMIC 0.1uF 50V	
C409	1-164-159-11	CERAMIC 0.1uF 50V	
C414	1-164-159-11	CERAMIC 0.1uF 50V	
C416	1-164-159-11	CERAMIC 0.1uF 50V	
C425	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C426	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C427	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C428	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C429	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C430	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C431	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C432	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C450	1-126-024-11	ELECT 220uF 20% 16V	(C215/C315)
C460	1-126-024-11	ELECT 220uF 20% 16V	(C215/C315)
C551	1-161-494-00	CERAMIC 0.022uF 25V	
C651	1-162-291-31	CERAMIC 560PF 10% 50V	(C215/C315)
C652	1-162-291-31	CERAMIC 560PF 10% 50V	(C215/C315)
C653	1-164-159-11	CERAMIC 0.1uF 50V	(C215/C315)
		< CONNECTOR >	
CN301	* 1-573-046-11	SOCKET, CONNECTOR 18P	
CN401	* 1-573-080-11	SOCKET, CONNECTOR (34P, L TYPE)	
CN402	* 1-568-946-11	PIN, CONNECTOR 8P	
CN403	* 1-568-824-11	SOCKET, CONNECTOR 5P	
CN404	* 1-568-943-11	PIN, CONNECTOR 5P	
CN406	* 1-568-941-11	PIN, CONNECTOR 3P	(C215/C315)
CN501	* 1-573-080-11	SOCKET, CONNECTOR (34P, L TYPE)	
CN901	* 1-573-047-11	PIN, CONNECTOR	
		< DIODE >	
D201	8-719-200-82	DIODE 1ES2	
D202	8-719-109-97	DIODE RD6.8ES-2B	
D203	8-719-200-82	DIODE 1ES2	
D204	8-719-200-82	DIODE 1ES2	
D205	8-719-200-82	DIODE 1ES2	
D206	8-719-200-82	DIODE 1ES2	
D208	8-719-109-89	DIODE RD5.6ES-B2	
D209	8-719-912-20	DIODE 1SS120	
D341	8-719-210-21	DIODE 1EQS04	
D351	8-719-912-20	DIODE 1SS120	
		< FLUORESCENT INDICATOR >	
FL501	1-519-655-11	FLUORESCENT INDICATOR	

Ref. No.	Part No.	Description	Remark
		< IC >	
IC201	8-759-633-42	IC M5293L	
IC202	8-759-630-21	IC M5290P-16	
IC203	8-759-945-58	IC RC4558P	
IC204	8-759-604-86	IC M5F7807L	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-752-343-01	IC CXD2561M	
IC306	8-759-990-82	IC TL082CP	
IC307	8-759-945-58	IC RC4558P	
IC309	8-759-981-85	IC RC4556D	(C215/C315)
IC401	8-752-817-42	IC CXP50116-213Q	
IC402	8-759-821-32	IC CXA-1291P	
IC551	8-741-100-48	IC SBX1610-59	
		< JACK >	
J381	1-569-442-11	JACK, PIN 2P (LINE OUT)	
J651	1-568-519-21	JACK, LARGE TYPE (HEADPHONES)	(C215/C315)
		< COIL >	
L331	1-408-403-00	INDUCTOR 3.3uH	
L651	1-412-473-21	INDUCTOR 0uH	(C215/C315)
L652	1-412-473-21	INDUCTOR 0uH	(C215/C315)
L653	1-412-473-21	INDUCTOR 0uH	(C215/C315)
		< LINK >	
PS201	⚠ 1-532-685-00	LINK, IC ICP-N20 (0.8A)	(C315:AEP, UK, Australian, E)
PS202	⚠ 1-532-637-00	LINK, IC ICP-N25 (1.0A)	(C315:AEP, UK, Australian, E)
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q202	8-729-140-96	TRANSISTOR 2SD774-34	
Q203	8-729-111-67	TRANSISTOR 2SB1094-L	
Q204	8-729-900-65	TRANSISTOR DTA144ES	
Q205	8-729-900-89	TRANSISTOR DTC144ES	
Q206	8-729-900-89	TRANSISTOR DTC144ES	
Q209	8-729-281-52	TRANSISTOR 2SC1815-Y	
Q341	8-729-900-65	TRANSISTOR DTA144ES	
Q342	8-729-900-65	TRANSISTOR DTA144ES	
Q343	8-729-900-65	TRANSISTOR DTA144ES	
Q344	8-729-900-89	TRANSISTOR DTC144ES	
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q372	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q373	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q374	8-729-141-30	TRANSISTOR 2SC3623A-LK	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN DISPLAY POWER SW HEADPHONE

Ref. No.	Part No.	Description				Remark
Q375	8-729-231-55	TRANSISTOR 2SC2878-AB				
Q376	8-729-231-55	TRANSISTOR 2SC2878-AB				
Q401	8-729-900-89	TRANSISTOR DTC144ES				
		< RESISTOR >				
R201	1-249-435-11	CARBON	33K	5%	1/4W	
R202	1-249-438-11	CARBON	56K	5%	1/4W	
R203	1-249-429-11	CARBON	10K	5%	1/4W	
R204	1-249-425-11	CARBON	4.7K	5%	1/4W	
R205	1-249-425-11	CARBON	4.7K	5%	1/4W	
R208	1-249-423-11	CARBON	3.3K	5%	1/4W	
R209	1-249-413-11	CARBON	470	5%	1/4W	
R210	1-249-429-11	CARBON	10K	5%	1/4W	
R211	1-249-410-11	CARBON	270	5%	1/4W	
R212	1-249-392-11	CARBON	8.2	5%	1/4W	
R213	1-249-392-11	CARBON	8.2	5%	1/4W	
R214	1-249-417-11	CARBON	1K	5%	1/4W	
R301	1-249-411-11	CARBON	330	5%	1/4W	
R302	1-249-417-11	CARBON	1K	5%	1/4W	
R303	1-249-417-11	CARBON	1K	5%	1/4W	
R311	1-249-423-11	CARBON	3.3K	5%	1/4W	
R312	1-249-429-11	CARBON	10K	5%	1/4W	
R313	1-249-423-11	CARBON	3.3K	5%	1/4W	
R314	1-249-429-11	CARBON	10K	5%	1/4W	
R315	1-249-417-11	CARBON	1K	5%	1/4W	
R316	1-249-417-11	CARBON	1K	5%	1/4W	
R317	1-249-420-11	CARBON	1.8K	5%	1/4W	
R318	1-249-441-11	CARBON	100K	5%	1/4W	
R321	1-249-417-11	CARBON	1K	5%	1/4W	
R322	1-249-417-11	CARBON	1K	5%	1/4W	
R323	1-249-417-11	CARBON	1K	5%	1/4W	
R324	1-249-417-11	CARBON	1K	5%	1/4W	
R330	1-249-417-11	CARBON	1K	5%	1/4W	
R331	1-249-417-11	CARBON	1K	5%	1/4W	
R341	1-249-393-11	CARBON	10	5%	1/4W	
R342	1-249-417-11	CARBON	1K	5%	1/4W	
R343	1-249-441-11	CARBON	100K	5%	1/4W	
R344	1-249-441-11	CARBON	100K	5%	1/4W	
R345	1-249-425-11	CARBON	4.7K	5%	1/4W	
R346	1-249-425-11	CARBON	4.7K	5%	1/4W	
R347	1-249-441-11	CARBON	100K	5%	1/4W	
R348	1-249-429-11	CARBON	10K	5%	1/4W	
R351	1-249-428-11	CARBON	8.2K	5%	1/4W	
R352	1-249-428-11	CARBON	8.2K	5%	1/4W	
R353	1-249-428-11	CARBON	8.2K	5%	1/4W	
R354	1-249-428-11	CARBON	8.2K	5%	1/4W	
R355	1-249-428-11	CARBON	8.2K	5%	1/4W	
R356	1-249-428-11	CARBON	8.2K	5%	1/4W	
R357	1-249-428-11	CARBON	8.2K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R358	1-249-428-11	CARBON	8.2K	5%	1/4W	
R359	1-247-903-00	CARBON	1M	5%	1/4W	
R361	1-249-423-11	CARBON	3.3K	5%	1/4W	
R362	1-249-423-11	CARBON	3.3K	5%	1/4W	
R363	1-249-423-11	CARBON	3.3K	5%	1/4W	
R364	1-249-423-11	CARBON	3.3K	5%	1/4W	
R365	1-249-430-11	CARBON	12K	5%	1/4W	
R366	1-249-430-11	CARBON	12K	5%	1/4W	
R367	1-249-430-11	CARBON	12K	5%	1/4W	
R368	1-249-430-11	CARBON	12K	5%	1/4W	
R369	1-249-419-11	CARBON	1.5K	5%	1/4W	
R370	1-249-419-11	CARBON	1.5K	5%	1/4W	
R371	1-249-419-11	CARBON	1.5K	5%	1/4W	
R372	1-249-419-11	CARBON	1.5K	5%	1/4W	
R373	1-247-887-00	CARBON	220K	5%	1/4W	
R374	1-247-887-00	CARBON	220K	5%	1/4W	
R375	1-249-409-11	CARBON	220	5%	1/4W	
R376	1-249-409-11	CARBON	220	5%	1/4W	
R377	1-249-409-11	CARBON	220	5%	1/4W	
R378	1-249-409-11	CARBON	220	5%	1/4W	
R379	1-249-425-11	CARBON	4.7K	5%	1/4W	
R380	1-249-425-11	CARBON	4.7K	5%	1/4W	
R381	1-249-425-11	CARBON	4.7K	5%	1/4W	
R382	1-249-425-11	CARBON	4.7K	5%	1/4W	
R383	1-249-414-11	CARBON	560	5%	1/4W	
R384	1-249-414-11	CARBON	560	5%	1/4W	
R385	1-249-393-11	CARBON	10	5%	1/4W	
R386	1-249-393-11	CARBON	10	5%	1/4W	
R401	1-249-433-11	CARBON	22K	5%	1/4W	
R402	1-249-433-11	CARBON	22K	5%	1/4W	
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-249-425-11	CARBON	4.7K	5%	1/4W	
R405	1-249-425-11	CARBON	4.7K	5%	1/4W	
R406	1-249-425-11	CARBON	4.7K	5%	1/4W	
R407	1-249-433-11	CARBON	22K	5%	1/4W	
R408	1-249-441-11	CARBON	100K	5%	1/4W	
R409	1-247-864-11	CARBON	24K	5%	1/4W	
R410	1-247-880-11	CARBON	110K	5%	1/4W	
R411	1-249-440-11	CARBON	82K	5%	1/4W	
R412	1-247-876-11	CARBON	75K	5%	1/4W	
R413	1-249-440-11	CARBON	82K	5%	1/4W	
R414	1-247-874-11	CARBON	62K	5%	1/4W	
R415	1-249-435-11	CARBON	33K	5%	1/4W	
R416	1-247-878-00	CARBON	91K	5%	1/4W	
R421	1-249-393-11	CARBON	10	5%	1/4W	
R422	1-249-393-11	CARBON	10	5%	1/4W	

MAIN DISPLAY POWER SW HEADPHONE TABLE MOTOR LOADING MOTOR OPEN/UP SW

Ref. No.	Part No.	Description				Remark
R425	1-249-429-11	CARBON	10K		5% 1/4W	
R426	1-249-429-11	CARBON	10K		5% 1/4W	
R427	1-249-429-11	CARBON	10K		5% 1/4W	
R428	1-249-429-11	CARBON	10K		5% 1/4W	
R429	1-249-429-11	CARBON	10K		5% 1/4W	
R430	1-249-429-11	CARBON	10K		5% 1/4W	
R431	1-249-429-11	CARBON	10K		5% 1/4W	
R432	1-249-429-11	CARBON	10K		5% 1/4W	
R450	1-249-435-11	CARBON	33K	5%	1/4W	(C215/C315)
R451	1-249-441-11	CARBON	100K	5%	1/4W	(C215/C315)
R452	1-249-437-11	CARBON	47K	5%	1/4W	(C215/C315)
R453	1-249-405-11	CARBON	100	5%	1/4W	(C215/C315)
R460	1-249-435-11	CARBON	33K	5%	1/4W	(C215/C315)
R461	1-249-441-11	CARBON	100K	5%	1/4W	(C215/C315)
R462	1-249-437-11	CARBON	47K	5%	1/4W	(C215/C315)
R463	1-249-405-11	CARBON	100	5%	1/4W	(C215/C315)
R501	1-249-422-11	CARBON	2.7K		5% 1/4W	
R502	1-249-424-11	CARBON	3.9K		5% 1/4W	
R503	1-249-427-11	CARBON	6.8K		5% 1/4W	
R504	1-249-432-11	CARBON	18K		5% 1/4W	
R505	1-249-422-11	CARBON	2.7K		5% 1/4W	
R506	1-249-424-11	CARBON	3.9K		5% 1/4W	
R507	1-249-427-11	CARBON	6.8K		5% 1/4W	
R508	1-249-432-11	CARBON	18K		5% 1/4W	
R509	1-249-422-11	CARBON	2.7K		5% 1/4W	
R551	1-249-422-11	CARBON	2.7K		5% 1/4W	
R552	1-249-424-11	CARBON	3.9K		5% 1/4W	
R553	1-249-427-11	CARBON	6.8K		5% 1/4W	
R554	1-249-432-11	CARBON	18K		5% 1/4W	
R555	1-249-422-11	CARBON	2.7K		5% 1/4W	
R556	1-249-424-11	CARBON	3.9K		5% 1/4W	
R557	1-249-427-11	CARBON	6.8K		5% 1/4W	
		< VARIABLE RESISTOR >				
RV651	1-241-506-11	RES, VAR, CARBON 1K/1K				(PHONE LEVEL) (C215/C315)
		< SWITCH >				
S201	⚠ 1-571-722-11	SWITCH, VOLTAGE SELECTION (E)				
S501	1-554-303-21	SWITCH, TACTILE (▶▶I)				
S502	1-554-303-21	SWITCH, TACTILE (I◀◀)				
S503	1-554-303-21	SWITCH, TACTILE (■)				
S504	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)				
S505	1-554-303-21	SWITCH, TACTILE (DISC SKIP)				
S506	1-554-303-21	SWITCH, TACTILE (EDIT TIME FADE)				
S507	1-554-303-21	SWITCH, TACTILE (▶▶)				
S508	1-554-303-21	SWITCH, TACTILE (◀◀)				
S509	1-554-303-21	SWITCH, TACTILE (▷)				

Ref. No.	Part No.	Description				Remark
S510	1-554-303-21	SWITCH, TACTILE (▮▮)				
S511	1-554-303-21	SWITCH, TACTILE (TIME)				
S512	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S551	1-554-303-21	SWITCH, TACTILE (DISC 1)				
S552	1-554-303-21	SWITCH, TACTILE (DISC 2)				
S553	1-554-303-21	SWITCH, TACTILE (DISC 3)				
S554	1-554-303-21	SWITCH, TACTILE (DISC 4)				
S555	1-554-303-21	SWITCH, TACTILE (DISC 5)				
S556	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
S557	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S558	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S559	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)				
S560	1-572-714-11	SWITCH, PUSH (POWER ON/OFF)				
		< CRYSTAL >				
X351	1-567-965-11	VIBRATOR, CRYSTAL (22.5MHz)				
**********						
*	1-638-729-11	TABLE MOTOR BOARD				
		**********				
*	1-638-730-11	LOADING MOTOR BOARD				
		**********				
*	1-638-731-11	OPEN/UP SW BOARD				
		**********				
		< CAPACITOR >				
C704	1-161-375-00	CERAMIC	0.0022uF	20%	50V	
C705	1-161-375-00	CERAMIC	0.0022uF	20%	50V	
		< CONNECTOR >				
CN705 *	1-566-214-11	PIN, CONNECTOR (PC BOARD) 2P				
CN707 *	1-573-044-11	SOCKET, CONNECTOR				
		< DIODE >				
D701	8-719-970-19	DIODE GP1A521				
		< RESISTOR >				
R701	1-249-416-11	CARBON	820	5%	1/4W	
		< SWITCH >				
S702	1-571-300-21	SWITCH, ROTARY (OPEN/UP)				

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
6	1-590-835-11	WIRE, FLAT TYPE (34 CORE)	
54	1-452-340-21	MAGNET	
63	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
101	1-535-892-11	JUMPER, FILM (WITH TERMINAL)	
124	⚠ 1-558-946-21	CORD, POWER (UK)	
124	⚠ 1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
124	⚠ 1-575-651-21	CORD, POWER (AEP)	
124	⚠ 1-575-653-21	CORD, POWER (E)	
124	⚠ 1-590-836-11	CORD, POWER (US, Canadian)	
125	⚠ 1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
151	⚠ 8-848-144-11	DEVICE, OPTICAL KSS-240A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)	
M702	A-4604-834-A	MOTOR ASSY, LOADING	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)	
T901	⚠ 1-449-954-11	TRANSFORMER, POWER (US, Canadian)	
T901	⚠ 1-449-955-11	TRANSFORMER, POWER (AEP, UK, Australian)	
T901	⚠ 1-449-956-11	TRANSFORMER, POWER (E)	

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ACCESSORY & PACKING MATERIAL
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	1-465-733-11	REMOTE COMMANDER (C315)
	1-559-533-11	CORD, CONNECTION
	2-181-754-01	COVER, BATTERY (C315)
	3-753-144-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, UK, E)
	3-753-144-21	MANUAL, INSTRUCTION (ENGLISH) (US, Canadian, Australian)
	3-753-144-31	MANUAL, INSTRUCTION (FRENCH) (Canadian)
	3-753-144-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)
	4-937-945-01	PLATE (TRANSPORT), LOCK
*	4-941-548-01	LABEL, CLASS 1 (AEP, UK, E, Australian)
*	4-944-109-01	INDIVIDUAL CARTON (C315)
*	4-944-109-11	INDIVIDUAL CARTON (C215)
*	4-944-109-21	INDIVIDUAL CARTON (C211)
*	4-944-110-01	CUSHION (FRONT)
*	4-944-111-01	CUSHION (REAR)

Ref. No.	Part No.	Description	Remark
		HARDWARE LIST	
		**********	
# 1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
# 2	7-682-548-04	SCREW +BVTT 3X8 (S)	
# 3	7-682-547-04	SCREW +BVTT 3X6 (S)	
# 4	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S (C215/C315)	
# 5	7-682-554-04	SCREW +B 3X25	
# 6	7-685-648-79	SCREW (M3X12), TAPPING	
# 7	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT	
# 8	7-685-647-79	SCREW, TAPPING	
# 9	7-621-255-15	SCREW +P 2X3	
#10	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	

Note:	**Note:**
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